

QUASI-PHASE-MATCHING PHOTODYNAMIC THERAPY (PDT) AND PHOTODYNAMIC DIAGNOSIS (PDD) LASER SOURCES

ABSTRACT OF THE DISCLOSURE

A laser system providing a laser source suitable for medical PDT (Photodynamic Therapy) and PDD (Photodynamic Diagnosis) is purposed. The laser system includes a pump laser emitting at least one wavelength to pump a wavelength converter inside a laser resonating system; a wavelength converter using QPM (Quasi-Phase-Matching) technique to convert the wavelength emitted by the pump laser to at least one wavelength suitable for the PDT and the PDD; a laser resonating system for enhancing the output intensity of the laser suitable for the PDT and the PDD generated from the wavelength converter pumped by the pump laser; and an optical transmission and output device for receiving and transmitting the output laser from the laser resonator system to its end optical output component, through which at least one specific target is illuminated.